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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,981	12/28/2005	Micha Zimmermann	69005-00002USPX	3595
30223	7590	11/02/2007		
NIXON PEABODY LLP 161 N. CLARK STREET 48TH FLOOR CHICAGO, IL 60601-3213			EXAMINER HASAN, MOHAMMED A	
			ART UNIT 2873	PAPER NUMBER
			MAIL DATE 11/02/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/562,981

Applicant(s)

ZIMMERMANN, MICHA

Examiner

Mohammed Hasan

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 22-31,35-37 and 45-51 is/are pending in the application.
- 4a) Of the above claim(s) 1-21,32-34 and 38-44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-28,35-37 and 45 is/are rejected.
- 7) ☒ Claim(s) 29,30,31,46-51 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 3/13/2006.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-21,32-34,38-44 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 9/17/2007.
2. Applicant's election without traverse of claims 22-31,35-37,45-51 in the reply filed on 9/17/2007 is acknowledged.

### ***Oath/Declaration***

2. Oath and declaration filed on 12/28/2005 is accepted.

### ***Information Disclosure Statement***

3. The prior art documents submitted by applicant in the Information Disclosure Statement filed on 3/13/2006 have all been considered and made of record (note the attached copy of form PTO – 1449).

### ***Specification***

4. The abstract of the disclosure is objected to because "Abstract" need separate page. Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22-28,35-37, and 45 are rejected under 35 U.S.C. 102 (b) as being anticipated by Kathman (6,157,502).

Regarding claim 22, Kathman discloses (refer to figure 2) a method for optical alignment comprising : providing an optical element (24) comprising a curved surface and mounting an optical component (30) on a mounting surface of an optical bench and forming an opening in the mounting surface the opening having a size and shape suitable to engage the curved surface of the optical element so as to permit alignment of the optical element with the optical component by rotation of the optical element within the opening while the curved surface is engaged by the opening (column 4, lines 38-55, column 2, lines 50-55).

Regarding claim 23.Kathman discloses wherein the curved surface has a center of curvature, and wherein the size and shape of the opening are such as to permit the alignment by rotation of the optical element about the center of curvature (as shown in figure 2).

Regarding claim 24. Kathman discloses (refer to figure 2) wherein the size and

shape of the opening permit the alignment of optical element with the component by translation of the optical element within the opening while the curved surface is engaged by the opening (as shown in figure 2).

Regarding claim 25, Kathman discloses (refer to figure 2) wherein the curved surface performs at least one of refraction, reflection, and diffraction of electromagnetic (EM) radiation incident thereon, and wherein the alignment comprises adjusting a path of the radiation between the component and the optical element (as shown in figure 2).

Regarding claim 26, Kathman discloses wherein the curved surface (refer to figure 2) comprises at least one further surface thereon, and wherein the alignment comprises adjusting a path of EM radiation transferred between the at least one further surface and the component (as shown in figure 2).

Regarding claim 27, Kathman discloses wherein the optical element comprises a region within the optical element that is adapted to perform at least one of refraction, reflection and diffraction of EM radiation incident on the region, and wherein the alignment comprises adjusting a path of the EM radiation between the region and the component (as shown in figure 2).

Regarding claim 28, Kathman discloses an internal optical element within the optical element and configuring an optical element to the internal optical element within the curved surface (as shown in figure 2).

Regarding claim 35, Kathman discloses (refer to figure 2) a method for optical alignment, comprising: providing a holder comprising a curved surface; mounting an optical element (24) on the holder; mounting an optical component on a

mounting surface of an optical bench (28) ; and forming an opening in the mounting surface, the opening having a size and shape suitable to engage the curved surface of the holder so as to permit alignment of the optical element with the optical component by relative rotation of the optical element (30) within the opening while the curved surface is engaged by the opening (column 4, lines 38-55, column 2, lines 50-55).

Regarding claim 36, Kathman discloses (refer to figure 2) a method for optical alignment, comprising: providing an optical element (24) comprising a curved surface; mounting an optical component on a mounting surface of an optical bench (28); and engaging the curved surface of the optical element with the mounting surface so as to permit alignment of the optical element with the optical component (30) by relative rotation of the optical element on the mounting surface while the curved surface is engaged therewith (column 4, lines 38-55, column 2, lines 50-55).

Regarding claim 37, Kathman discloses (refer to figure 2) a method for optical alignment, comprising: providing a holder comprising a curved surface; mounting an optical element (24) on the holder; mounting an optical component (30) on a mounting surface of an optical bench; forming an opening in a mounting surface of an optical bench, the opening having a size and shape suitable to engage the curved surface of the optical element so as to permit alignment of the optical element with an optical component fixed in relation to the optical bench by rotation of the optical element within the opening while the curved surface is engaged by the opening (column 4, lines 38-55, column 2, lines 50-55).

Regarding claim 45. Kathman discloses (refer to figure 2) a method for optical alignment comprising: providing an optical element (24) comprising a curved surface and forming an opening in a mounting surface of an optical bench, the opening having a size and shape suitable to engage the curved surface of the optical element so as to permit alignment of the optical element so that optical component (30) fixed in relation to the optical bench by rotation of the optical element within the opening while the curved surface is engaged by the opening (column 4, lines 38-55, column 2, lines 50-55).

***Allowable Subject Matter***

6. Claims 29, 30, 31, and 46-51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to show, wherein the curved surface is engaged by the opening at one or more support regions, and comprising fixing the optical element to the opening while the curved surface is engaged by the opening at the one or more support regions and comprising contacting the curved surface with one or more actuators which are adapted to perform the relative rotation as one of two or more rotations orthogonal to each other and wherein the one or more actuators comprise two actuators distributed symmetrically with respect to the optical element and wherein the curved surface has a center of curvature and wherein the size and shape of the opening are such as to permit the alignment by rotation of the optical element about the

center of curvature and coupling one or more actuators to the optical bench , the one or more actuators being adapted to perform the relative rotation.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The closest prior art Chang et al (5,808,793) discloses a low-cost compact optical isolators and Hehmann (6,081,635) discloses a microoptical module with a WDM filter and an optical isolator for fiber optic amplifier system.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammed Hasan whose telephone number is (571) 272-2331. The examiner can normally be reached on M-TH, 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky L Mack can be reached on (571) 272- 2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MH  
October 29, 2007

*M. Hasan*  
Mohammed Hasan  
Examiner, Au-2873